Kenneth Hwang

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SKILLS AND INTERESTS:

Certifications: SolidWorks Associate (2013), LabVIEW Associate Developer (2016)

Programming languages: Python, C#, C, Java, HTML/CSS; Softwares: Adobe Premiere Pro CC, Photoshop, MatLab, SolidWorks, LabView, Git, Unity3D; Languages: English, Mandarin Chinese

Interests: Robotics, Artificial Intelligence, Virtual Reality, Psychology, Gaming, Sci-Fi, Traveling

EDUCATION:

U.C. Berkeley, Bachelor of Science in Mechanical Engineering — Graduated: May 2016

PROFESSIONAL EXPERIENCE

MirraViz, Fremont, CA — **Oct 2016 – Present**

Product Engineer

- Optimized display screen manufacturing process, reducing total manufacturing time by x8, allowing company to hit its first 100 screen milestone and secure additional seed funding
- Designed 3D-printed prototypes in Autodesk Inventor CAD and led content creation for company website, Youtube channel, Facebook page, Google Adwords, and tradeshow collateral
- Ignited company's online presence with 575.8k view viral Reddit post with 300x increase traffic to company website, resulting in additional media coverage with 12+ million views

Make School & Upload VR, San Francisco, CA — **Jun 2016 – Aug 2016**

Virtual Reality Development Track

- Created VR experiences in Unity3D/C# for HTC Vive to learn game design as well as VR best practices
- Launched projects, optimizing for high-fps performance, and incorporating in-game user analytics
- Developed own VR game, Bender, with elemental Earth superpowers to explore experiences that are impossible in real life

UNDERGRADUATE PROJECTS

Self-balancing ball-on-plate system – Mechatronics Design Course

- Spearheaded design, manufacturing, integration, and testing of real-time embedded system that implements feedback control with image processing to successfully automatically balance ball on plate
- Developed 4 modes of path generation (point-to-point, circle, figure-8, square) with disturbance rejection
- Integrated electromechanical system with NI MyRIO FPGA, machined with laser cutting, water-jetting, mill

Autonomous height control of levitating ball – Measurement Systems for Mechatronics Course

- Calibrated infrared proximity sensor by finding relationship between sensor output voltage and ball height
- Analyzed sensor voltage to autonomously adjust fan to change ball height and graph system performance

Cardboard Platform Extension Project Team – Virtual Reality at Berkeley

- Prototyped smartphone into touch controller for Google Cardboard to expand user input capabilities
- Created a Unity3D project to control models with smartphone rotational input and touch gestures (swipe, multi-tap, etc.) to demonstrate the expanded capabilities and potential applications of Cardboard

Computer Science, Berkeley, CA

- **Twitter Trends (Python):** Created a geographical visualization of sentiments in US based on tweet words
- **Depth map (C):** Optimized image processing, x3.26 and x4.88 speedup with SSE/SIMD and OpenMP
- **Tex61 (Java):** Developed text formatter supporting fill, justify, pagination, commands, endnotes, etc.
- **Chess (MatLab):** Implemented 2P chess with graphical user interface and solved 8-queens problem